

I claim:

1. An arrangement for a piston and cylinder device,
comprising:

5 a cylinder unit having an inner space defined
therein, the inner space having a flowable medium disposed
therein;

a slidable piston unit disposed in the inner space,
the piston unit being movable in a forward and backward
10 direction, the piston unit dividing the inner space into a
first chamber and a second chamber;

a piston rod connected to the piston unit and having
a recess defined therein;

the cylinder unit having an end wall at the second
15 chamber, the end wall having at least a part of a first and
second cylinder channel defined therein, the cylinder unit
having a third cylinder channel defined therein;

a hollow sensor element disposed in the inner space
and attached to the end wall, the sensor element having an
20 axial sensor channel defined therein and extending
therethrough, the piston unit being slidably associated with
the sensor element and the sensor element extending through
the piston unit and into the recess of the piston rod;

the first cylinder channel in fluid communication
25 with the second chamber, the sensor channel having a bottom

end opening in fluid communication with one end of the second cylinder channel, the third cylinder channel in fluid communication with the first chamber; and

5 a conductive member disposed in the sensor element, the conductive member being connected to an electric unit for detecting an inductance.

2. The arrangement according to claim 1 wherein the recess is an enclosed chamber that is only in fluid
10 communication with the sensor channel.

3. The arrangement according to claim 1 wherein a first control valve in operative engagement with the first cylinder channel for controlling the flow of fluid through the
15 first cylinder channel.

4. The arrangement according to claim 1 wherein the arrangement has a second control valve in operative engagement with the second cylinder channel for controlling the flow of
20 fluid through the second cylinder channel.

5. The arrangement according to claim 1 wherein the arrangement has a third control valve in operative engagement with the third cylinder channel for controlling the flow of
25 fluid through the third cylinder channel.

6. The arrangement according to claim 1 wherein the piston rod has an upper end, the upper end having an axial opening defined therein that is in fluid communication with the recess of the piston rod and the sensor channel.

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7. The arrangement according to claim 5 wherein the third valve and the first valve are in communication with a first medium supply container so that a first medium in the first medium supply is in fluid communication with the first chamber and the second chamber.

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8. The arrangement according to claim 4, wherein the sensor element comprises an electrical detection element that is a tube-shaped element collaborating with the piston unit.

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9. The arrangement according to claim 8, wherein the sensor element is connected to position sensitive detection devices that consist of an electrical system.

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10. The arrangement according to claim 9 wherein the sensor element comprises an inductive functioning sensor device formed by an electrical conductor that has been wound into a coil that lies in the longitudinal direction of the tube-shaped element.

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11. The arrangement according to claim 10 wherein the second valve is in operative engagement with the sensor element and that a degree of opening of the second valve is controlled and regulated on the basis of signals and data that are received from the sensor element.

12. The arrangement according to claim 11 wherein the first valve and third valve are in operative engagement with the sensor element and that a degree of opening of the valves is controlled and regulated on the basis of signals and data that are received from the sensor element.

13. The arrangement according to claim 1 wherein the first cylinder channel carries a first fluid medium, the recess and the sensor channel carry a second fluid medium and the first fluid medium is separate from the second fluid medium.